



Soda Springs P4 Plant - CERCLA Update



August 19, 2020





Agenda

// Regulatory Update (CERCLA process)

// Site Conditions

// Water Quality

// Pump Testing West Plume (UBZ1&2)

// Pump Testing West Plume (UBZ3&4)

// Treatability Evaluation

// Water Treatment Construction

// Schedule



CERCLA Response Teams

// IDEQ: Stan Christensen, Bill Lawrence, Doug Tanner

// EPA: Conor Neal

// Jacobs

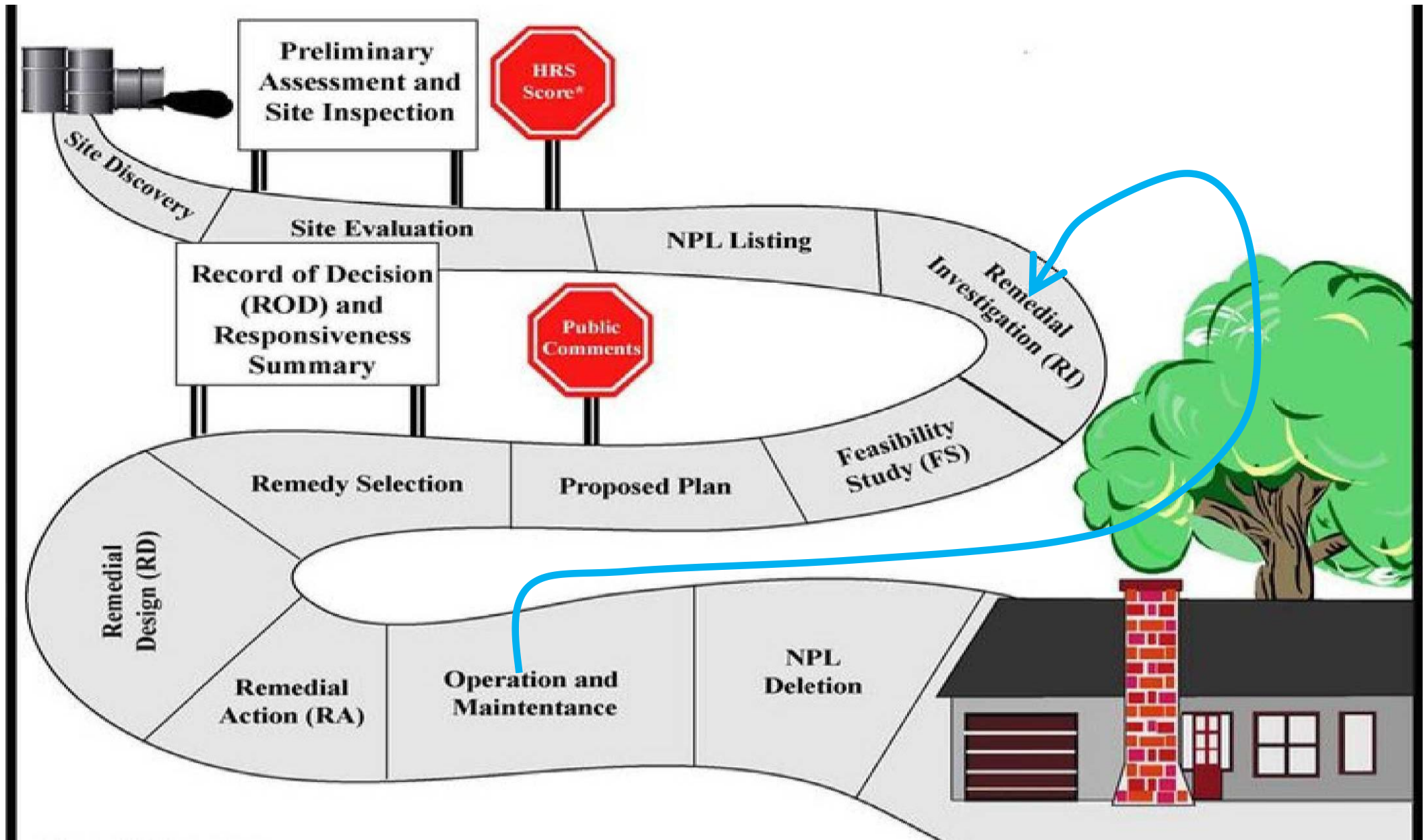
// Bayer: Jason Maughan, Brad Dykstra, Roger Gibson, Ryan Yamauchi, Randy Cooper, & (Engineering Support Staff)

// Golder Associates



CERCLA Regulatory Update

- // June 2020 P4 Production, LLC (P4) received Administrative Order on Consent (AOC) from EPA
- // Formal request for Supplemental Remedial Investigation & Focused Feasibility Study
- // Status: refinement of AOC & Scope of Work (SOW) language via discussions with EPA & IDEQ...call scheduled for 8/26/20
- // Site work continues with monitoring, plume capture evaluation, Se Water Treatment Demonstration Unit construction





Change in Selenium Concentrations June 2017 to June 2020

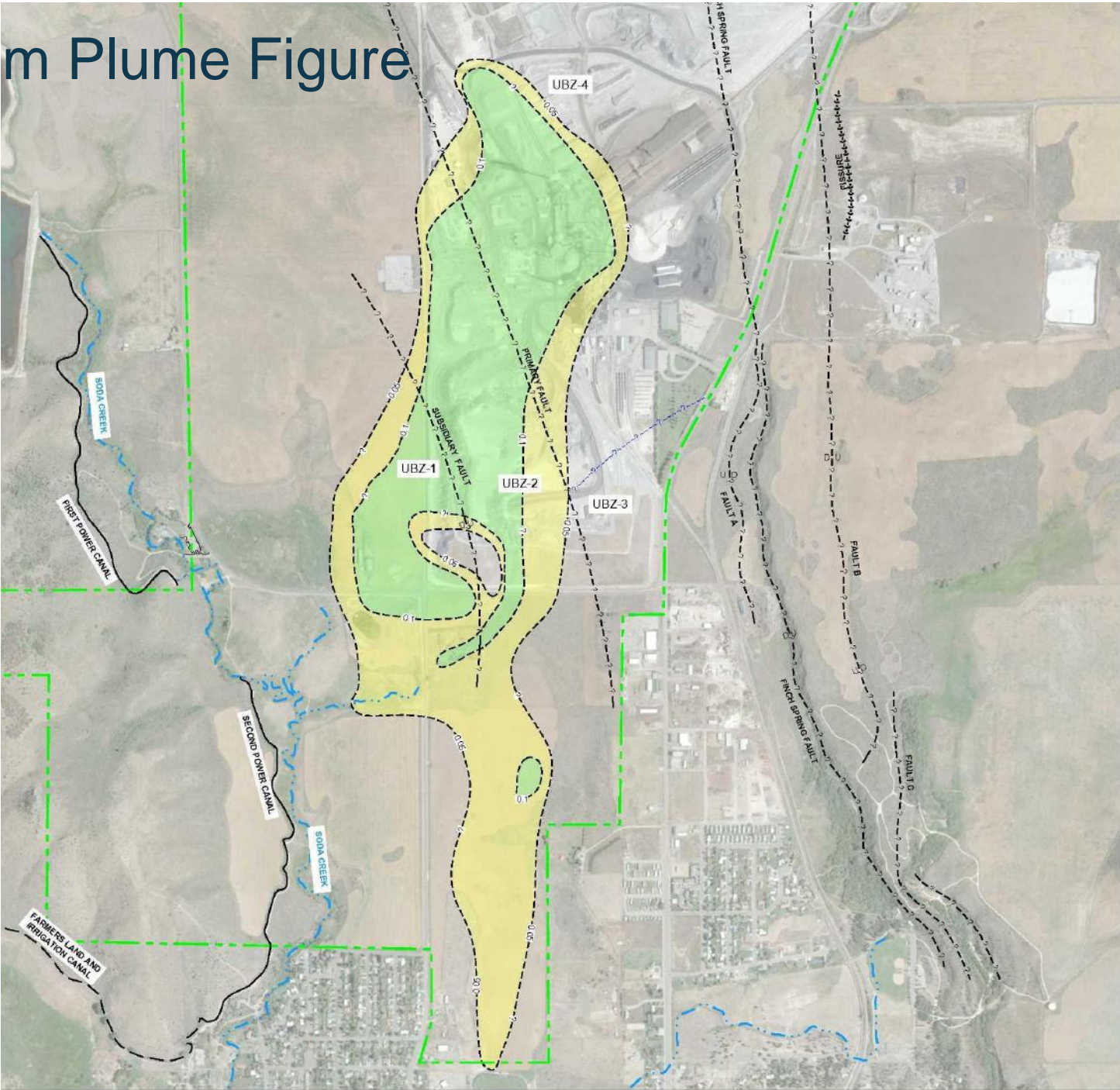
Location	Well or Spring	Selenium June 2017 (mg/L)	Selenium June 2020 (mg/L)	Percent Decrease June 2017 to June 2020
South Plant Fenceline	TW-20	0.0822	0.0253	69%
	TW-39	0.364	0.298	18%
	TW-58	0.157	0.122	22%
	TW-80	0.364	0.178	51%
	TW-81	0.0616	0.0238	61%
	TW-82	0.0136	0.0228	+83%
South and West of Plant	TW-53	0.134	0.0894	33%
	TW-86	0.148	0.0991	33%
	(b) (6) Well	0.165	0.100	39%
South of Plant	TW-54	0.179	0.0325	82%
	TW-55	0.0626	0.0234	63%
	TW-62	0.147	0.111	24%
	TW-70	0.092	0.0743	19%
Springs South and West of Plant	Mormon A Spring	0.228	0.0868	62%
	Mormon B Spring	0.136	0.09	34%
	Mormon C Spring	0.0803	0.0619	23%
	Mormon Creek	0.172	0.0662	62%

Numbers in **red** above remediation goal of 0.05 mg/L

Bold - Decreased below remediation goal from 2017 to 2020



2020 Selenium Plume Figure

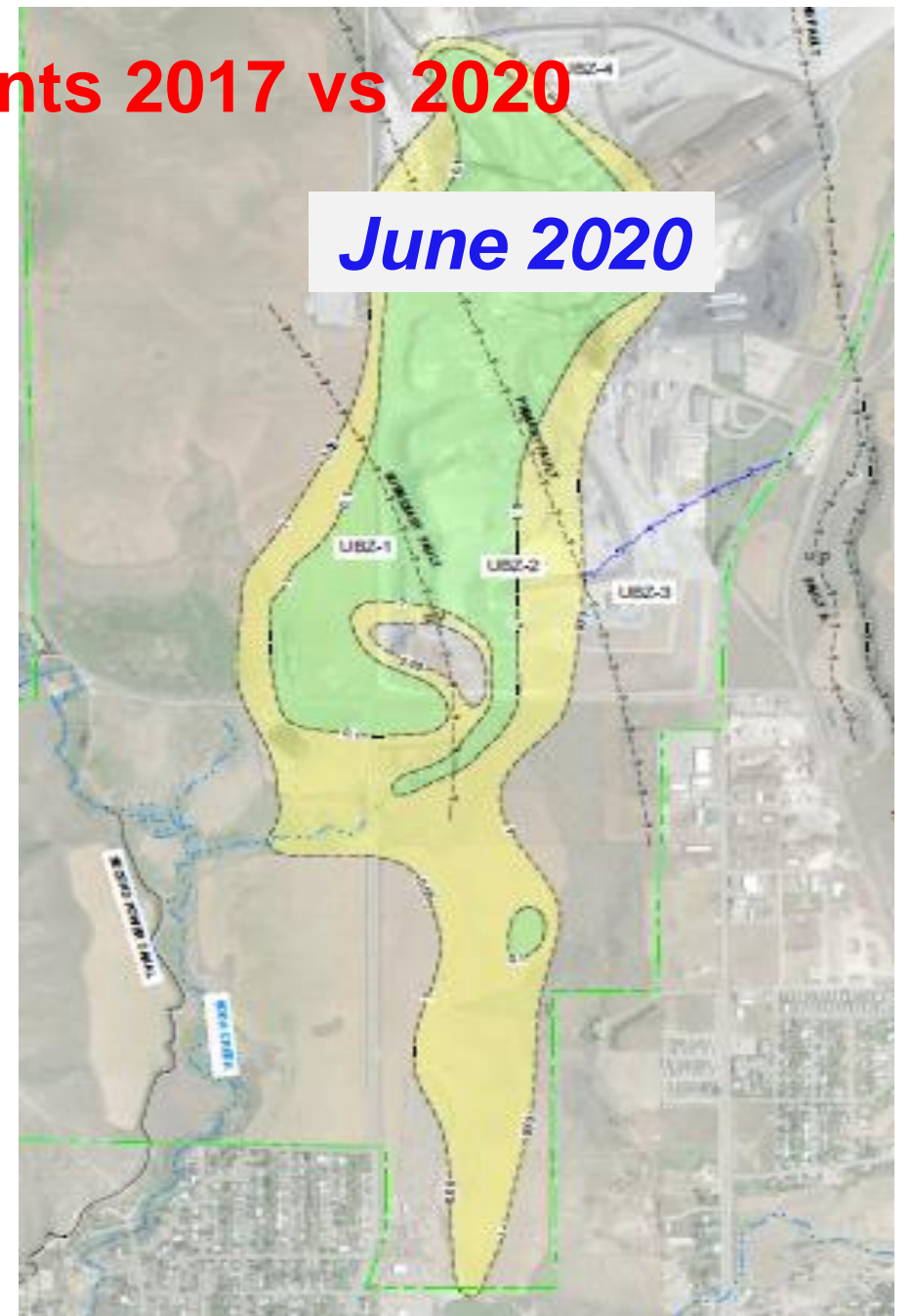


Comparison of Selenium Plume Extents 2017 vs 2020

June 2017

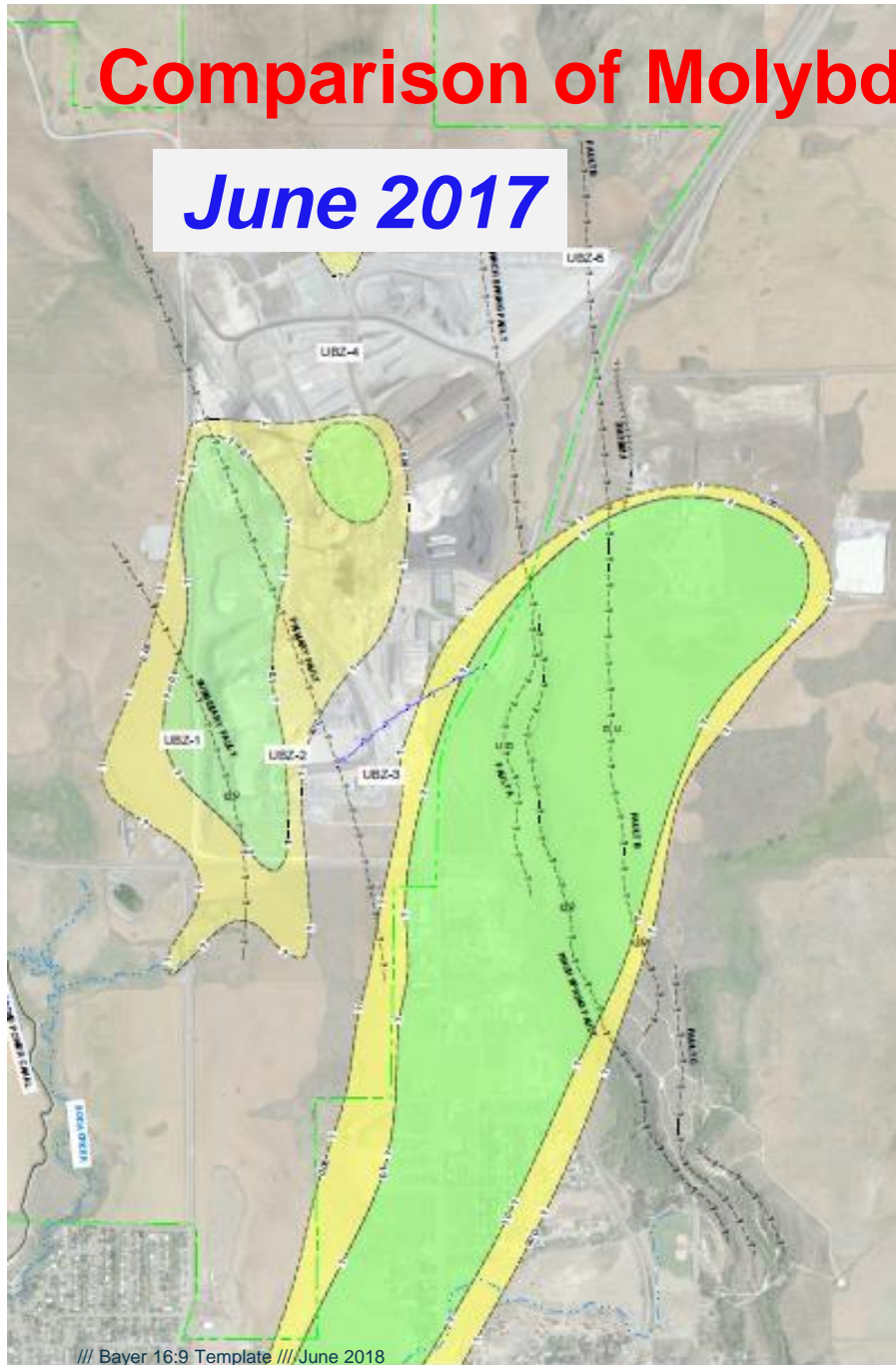


June 2020

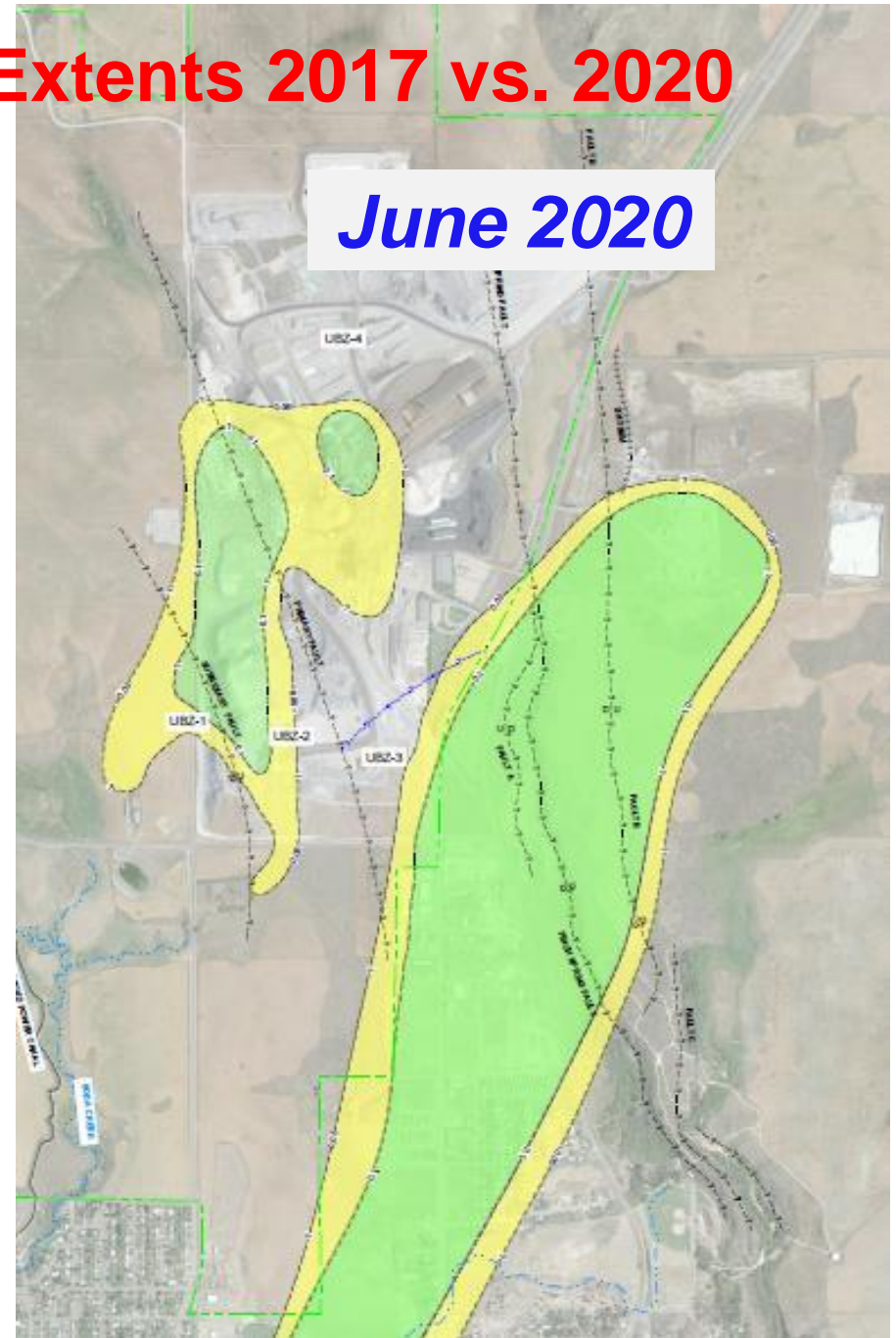


Comparison of Molybdenum Plume Extents 2017 vs. 2020

June 2017

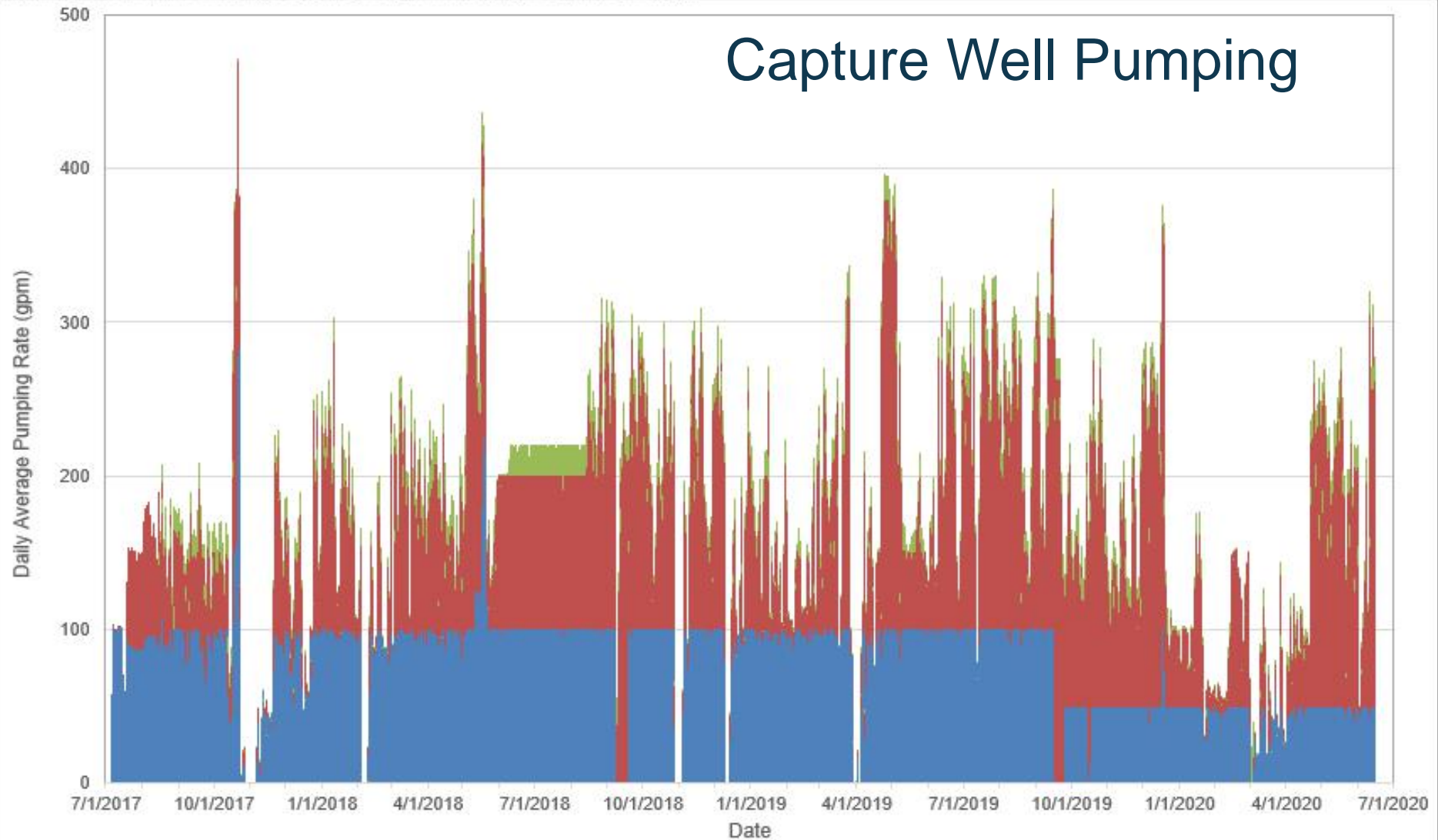


June 2020





Capture Well Pumping



LEGEND

- TW-83
- TW-80
- TW-58

CLIENT
BAYER
C/O P4 PRODUCTION LLC
SODA SPRINGS PLANT

CONSULTANT



PROJECT
UBZ-1 AND UBZ-2 EXTENDED PUMPING TEST
YEAR 2 ASSESSMENT
JULY 2018 TO JUNE 2019

TITLE
PUMPBACK WELLS
PUMPING HISTORY

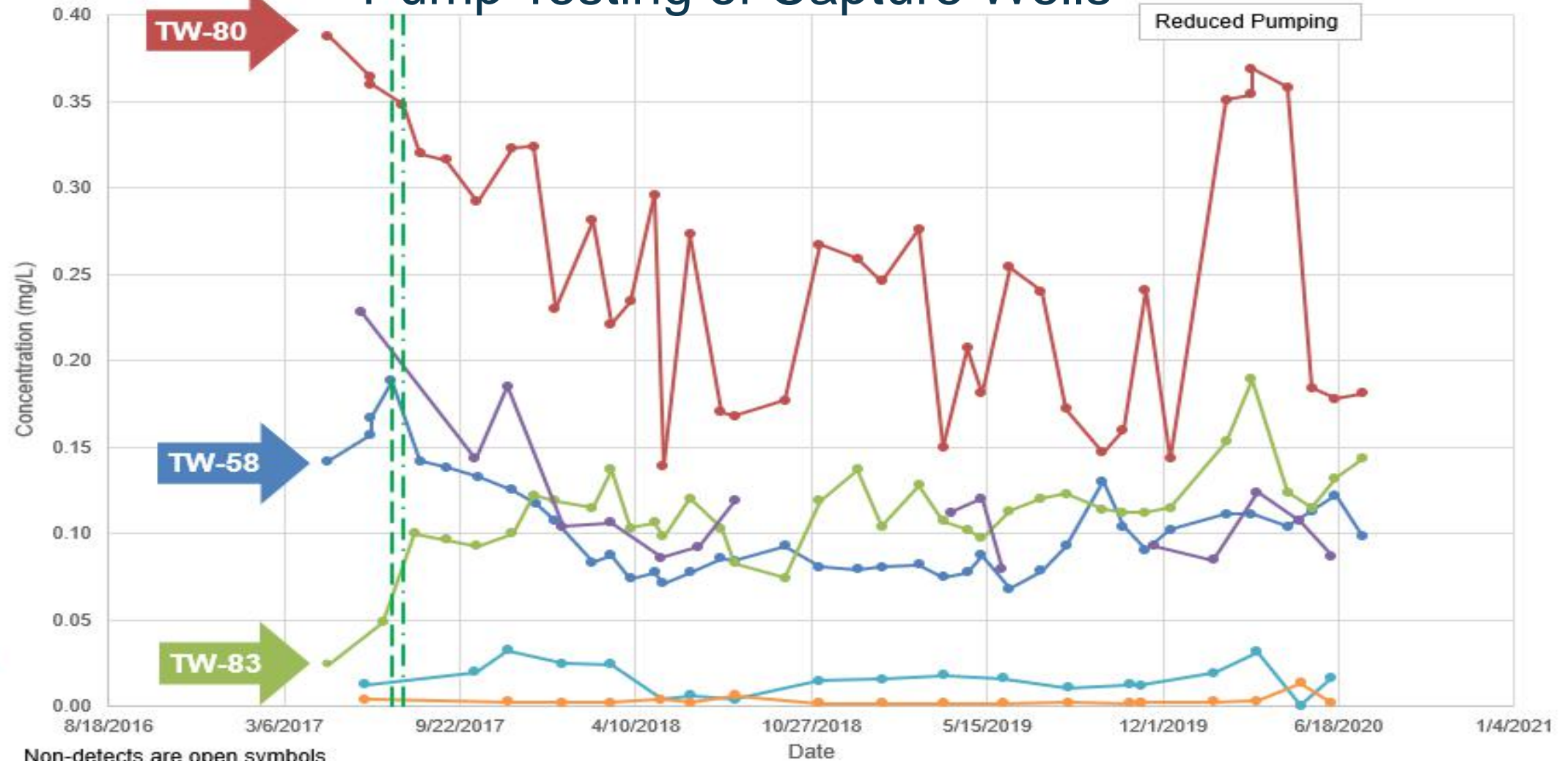
PROJECT NO.
913-1101-020

PHASE
002.2D

REV.
A

FIGURE
4-1

Pump Testing of Capture Wells



CLIENT
BAYER
C/O P4 PRODUCTION LLC
SODA SPRINGS PLANT
CONSULTANT



PROJECT
EXTENDED PUMPING TEST
UBZ-1 AND 2

TITLE
GROUNDWATER AND SURFACE WATER QUALITY
EXTENDED PUMPING TEST
SELENIUM

PROJECT NO.
913-1101-016.009 9A

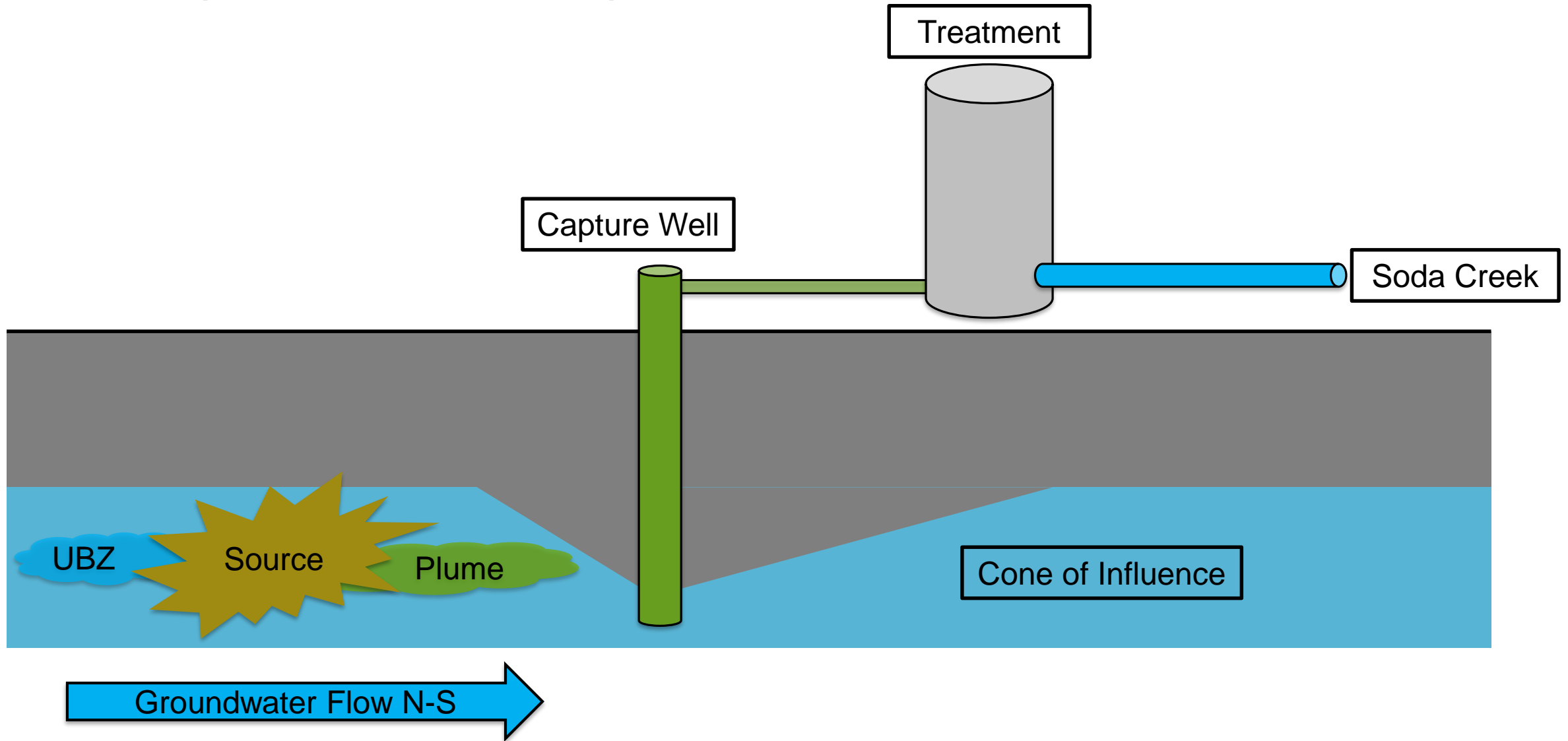
PHASE

REV.
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FIGURE
8-5

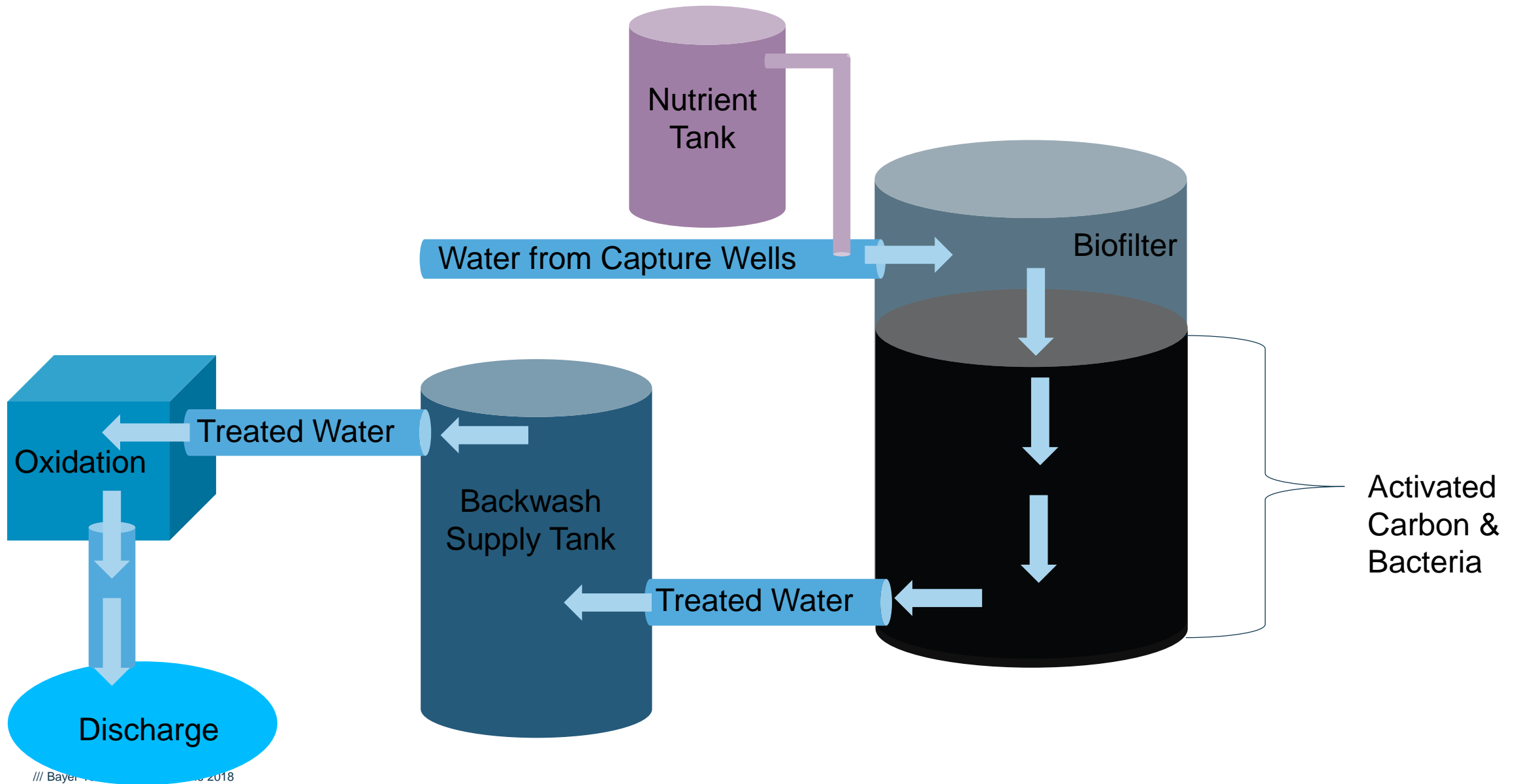


Pump and Treat Concept



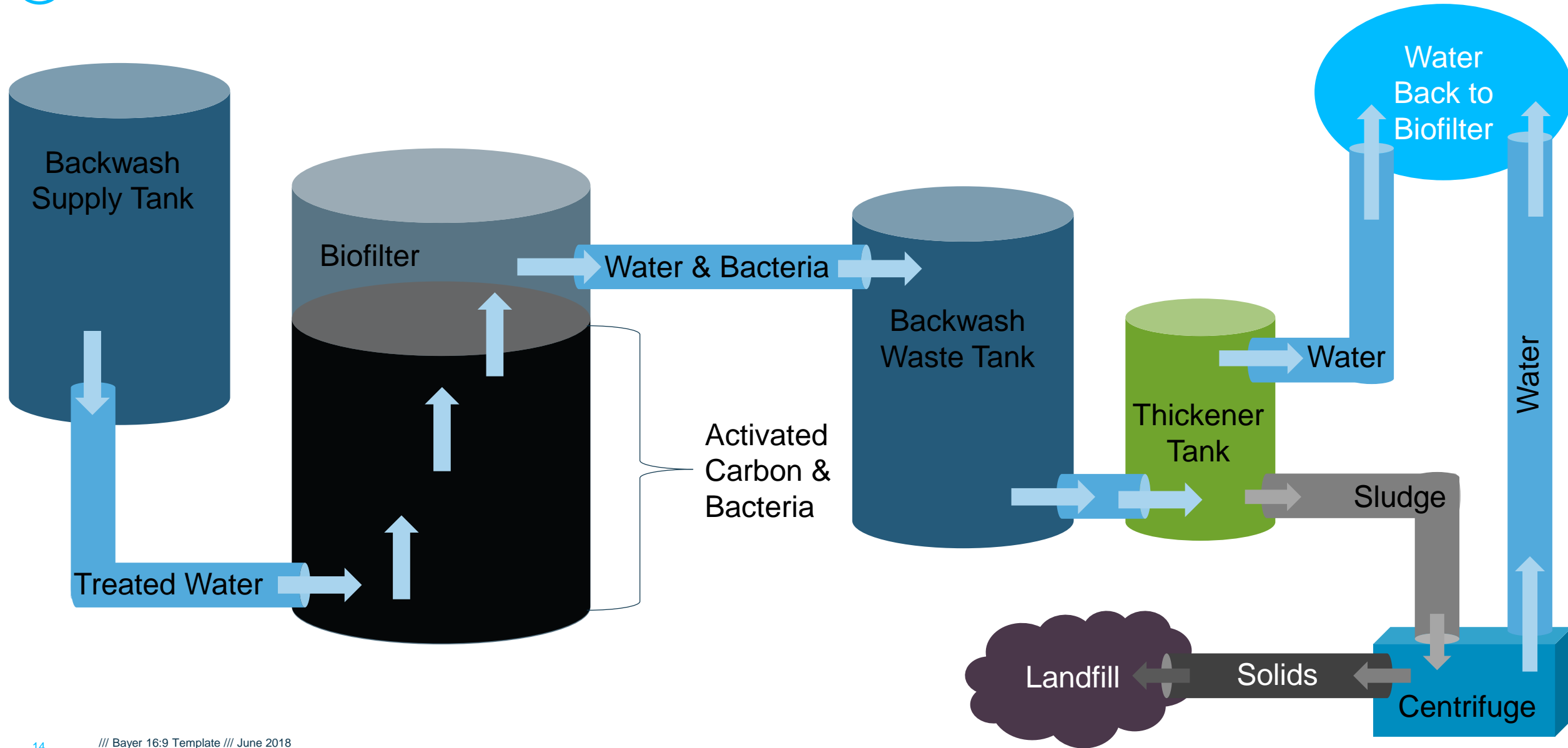


Se Water Treatment Flow: Normal Operation



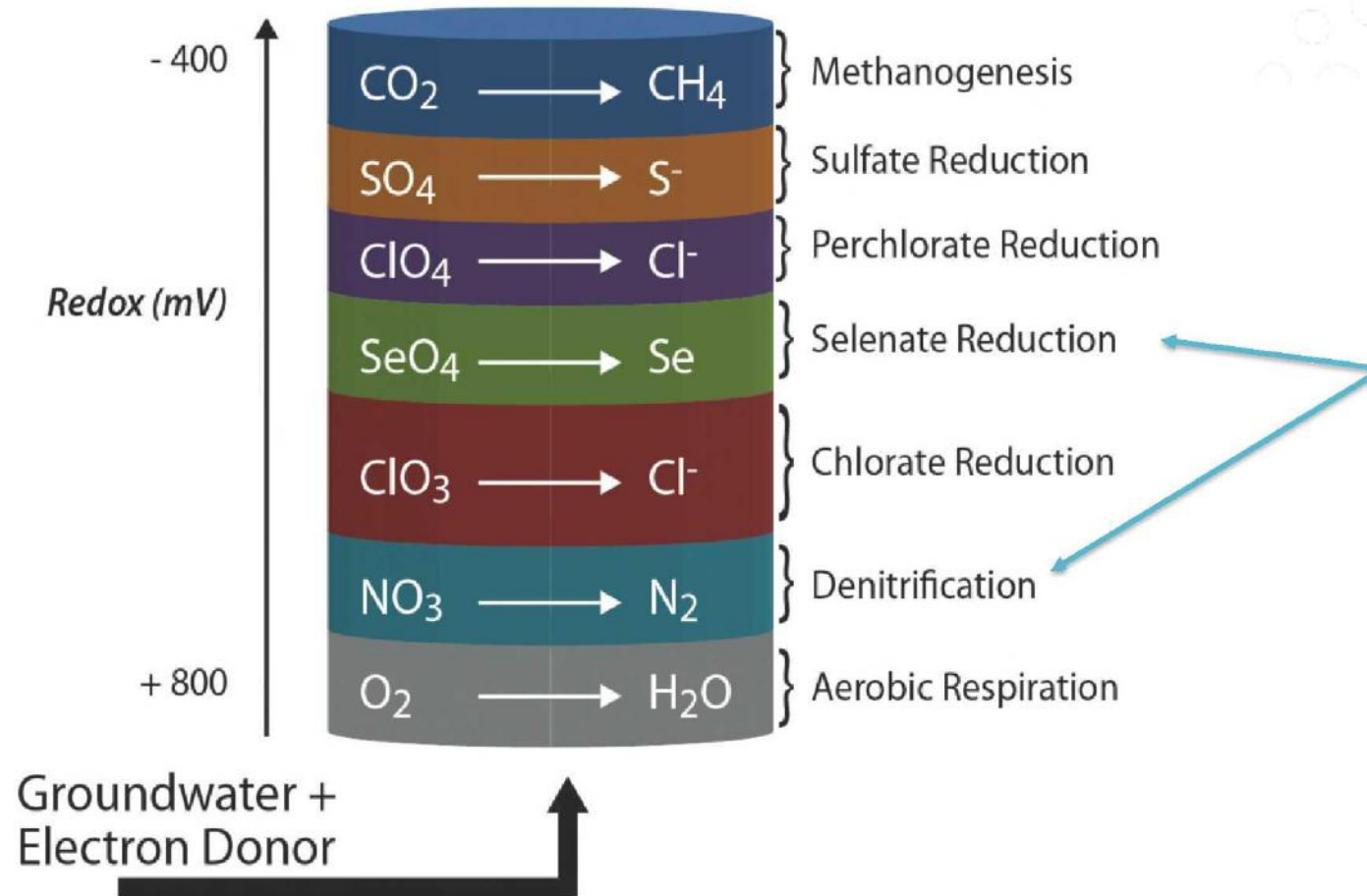


Se Water Treatment Flow: Backwash



Redox Profile of Biological Reduction

5



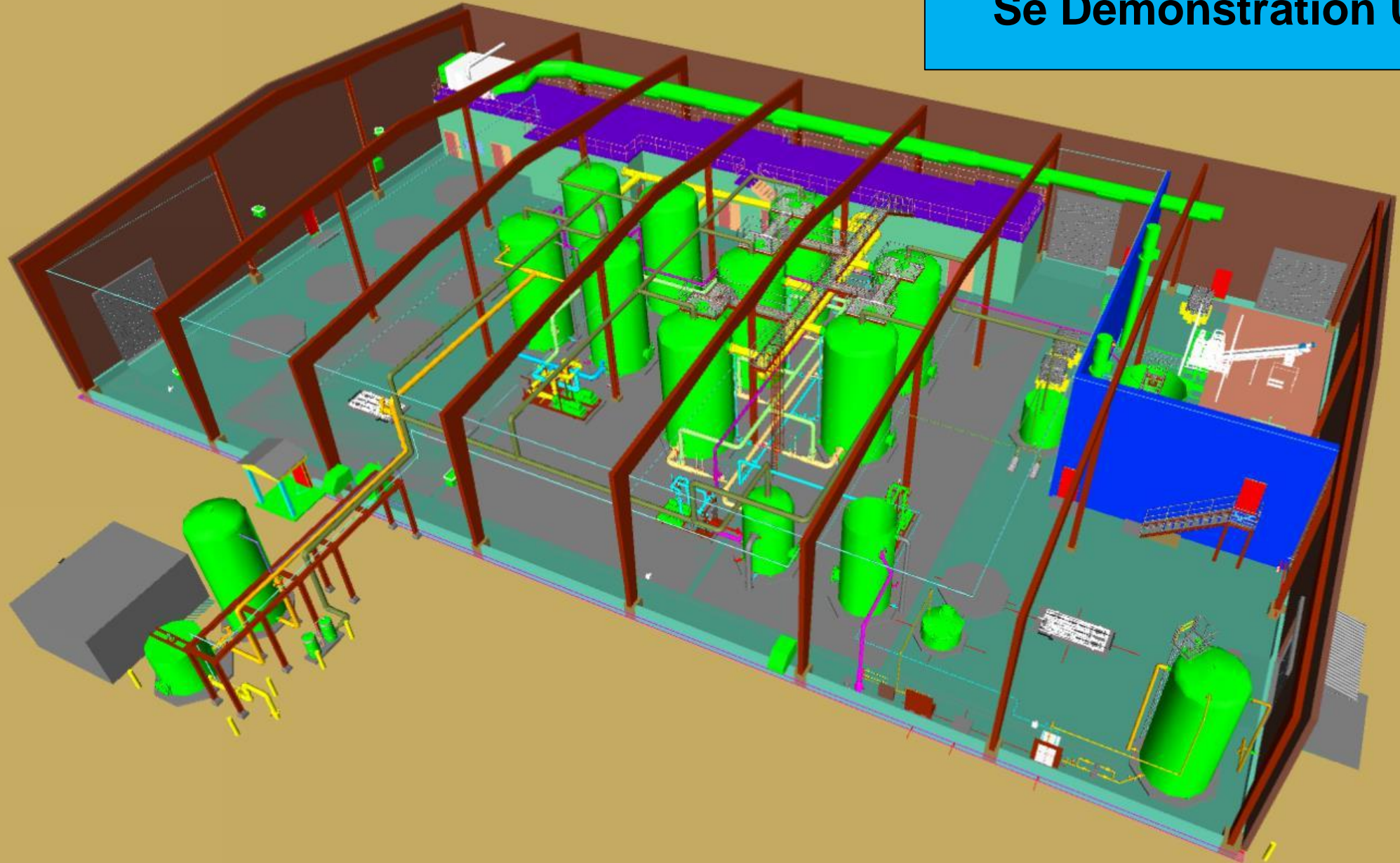


Status: Water Treatment Study

Selenium Treatment Demonstration Unit

- // January 2021 construction completion...commissioning & start-up
 - // Procurement delays related to Covid
 - // Design improvements for future optimization
- // Major Equipment Deliveries
 - // Backwash Tanks (July)
 - // Biofilter Tanks (5) (September to October)
 - // Thickener Tank & Centrifuge (September to November)

Se Demonstration Unit



June 2019 Demonstration Unit Construction



November 2019 Demonstration Unit Construction



July 2020 Demonstration Unit Construction



July 2020 Demonstration Unit Construction



July 2020 Demonstration Unit Construction



August 2020 Demonstration Unit Construction





Agency Comments



Questions?



Thank you!





Se Demonstration Unit - Block Flow

